

Human Genetic Disorder Project

Human genetics is a field that biologists are learning more about each year. With the work done by the Human Genome Project, more is known about the causes of genetic disorders found in humans.

In this activity, you and a partner will have an opportunity to choose a human genetic disorder and research the details of the disorder. You will EACH fill out a brainstorming sheet in your OWN WORDS. (Do NOT copy the information word for word from the websites!) Then TOGETHER you will use that information to create a visual aid which you will present to the class. A breakdown of how you will be graded for each part of this project can be found on the back of this sheet.

To start your research, go to www.ygyh.org/ and pick from the following genetic disorders found there. (Note: only one disorder can be researched per class.) To complete your brainstorming, use the information from this site in addition to ***at least 2 additional reliable web sources*** (3 total sources).

- Fragile X Syndrome
- Marfan Syndrome
- Hemophilia
- Cystic Fibrosis
- Duchenne/Becker Muscular Dystrophy
- Phenylketonuria (PKU)
- Huntington Disease
- Neurofibromatosis (NF)
- Sickle Cell Disease
- Hemochromatosis
- Tay-Sachs Disease
- Beta-thalassemia
- Down Syndrome
- Alzheimer Disease
- Polycystic Kidney Disease

Then, to make your visual aid, create a presentation using Google Drive and post it in google classroom. It must contain all of the information from your brainstorming sheet as well as at least 5 pictures that pertain to the disorder. Be sure to include the names and addresses of the web sources used as well.

You must pull your own weight in this project. If one person seems to be doing all of the work, you will lose points!

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Grading (40 points)

Information (20 pts)

- Name of disorder is clearly displayed at beginning of presentation
- The following information from your brainstorming sheet is included on your visual aid
 - Cause (Which chromosome? Which gene?)
 - Inheritance (How is it transmitted- dominant, recessive, sex-linked)
 - Incidence (How many people, males/females, race, location?)
 - Symptoms
 - Treatment
 - Testing/Screening
 - Prevention (Can it be prevented? If so, how)
 - At least 3 other interesting facts
- At least 3 web sources are cited at the end of the presentation
 - Name of website AND web address

Pictures (5 pts)

- At least 5 pictures are included on the visual aid
 - They are appropriate for the disorder

Appearance of Visual Aid (5 pts)

- Headings for each slide
- Bullet points used instead of sentences and paragraphs
- Easy to read and follow
- Proofread for spelling errors, etc.
- Creative and appropriate use of color/font

Oral Presentation (10 pts)

- Information is organized and flows well
- Information is presented clearly and effectively
- Students are knowledgeable regarding the disorder
- Appropriate volume
- Eye contact
 - Do NOT just read off screen